

AMENDMENTS TO THE CLAIMS:

Please amend the claims as follows:

1. (Currently Amended) A method of producing a crystal growth substrate, comprising:
molding a seed substrate into a desired shape so that irregularities are provided to a sapphire growth surface of said seed substrate;
growing a sapphire crystal on said sapphire growth surface of said seed substrate to thereby form a sapphire substrate; and
removing said seed substrate selectively from said sapphire substrate formed by said growing a sapphire crystal,
wherein cavities are formed periodically in said sapphire growth surface of said seed substrate during said molding a seed substrate.
2. (Previously Presented) A method of producing a crystal growth substrate according to claim 1, wherein at least one of silicon (Si) and gallium arsenide (GaAs) is used as a material of said seed substrate.
3. (Previously Presented) A method of producing a crystal growth substrate according to claim 1, wherein chemical etching is performed in the removing of the seed substrate.
4. (Previously Presented) A method of producing a crystal growth substrate according to claim 1, further comprising:
heating said sapphire substrate formed by said growing a sapphire substrate at a high temperature of not lower than about 1000°C to thereby perform phase transition of said sapphire substrate from γ phase to α phase.
5. (Previously Presented) A method of producing a crystal growth substrate according to claim 1, wherein the shape of said irregularities provided to said sapphire growth surface of said seed substrate is formed by use of cavities each having part of a substantially spherical shape during said molding a seed substrate.
6. (Currently Amended) A method of producing a crystal growth substrate according to

claim 1, wherein said cavities are ~~formed periodically so as to be~~ arranged two-dimensionally in said sapphire growth surface of said seed substrate ~~during said molding a seed substrate~~.

7. (Previously Presented) A method of producing a semiconductor light-emitting element, said semiconductor light-emitting element capable of emitting planar light and including a semiconductor laminated on a sapphire substrate by crystal growth, said method comprising:

molding a seed substrate into a desired shape so that irregularities are provided to a sapphire growth surface of said seed substrate;

growing a sapphire crystal on said sapphire growth surface of said seed substrate to thereby form a sapphire substrate;

growing a desired semiconductor layer as a crystal on said sapphire substrate; and

removing said seed substrate selectively from said sapphire substrate formed by the growing of the sapphire substrate.

8. (Currently Amended) A method of producing a semiconductor light-emitting element according to claim 7, further comprising:

forming an electrode, the step being provided between the growing of the semiconductor crystal and the removing of the seed substrate.

9. (Previously Presented) A method of producing a semiconductor light-emitting element according to claim 7, wherein said semiconductor layer comprises a Group III nitride compound semiconductor containing " $\text{Al}_x\text{Ga}_y\text{In}_{1-x-y}\text{N}$ ($0 \leq x \leq 1$, $0 \leq y \leq 1$, $0 \leq x+y \leq 1$)" as a main component, which may contain impurities as an additive or may be free from impurities.

10 - 11. (Canceled)

12. (Original) A method of producing a crystal growth substrate according to claim 1, wherein said seed substrate is capable of being etched more easily than sapphire (Al_2O_3).

13. (Original) A method of producing a semiconductor light-emitting element according to claim 7, wherein said seed substrate is capable of being etched more easily than sapphire (Al_2O_3).

14. (Previously Presented) A method of producing a crystal growth substrate according to claim 1, wherein said growing a sapphire crystal comprises epitaxially growing a sapphire crystal by an ionized cluster beam vapor deposition and epitaxy method.

15. (Previously Presented) A method of producing a crystal growth substrate according to claim 1, wherein said sapphire crystal is grown at a growth temperature of substantially 350°C.

16. (Previously Presented) A method of producing a crystal growth substrate according to claim 1, wherein said irregularities comprises substantially hemispherical convex portions.

17. (Previously Presented) A method of producing a crystal growth substrate according to claim 1, wherein said irregularities comprise convex microlenses.

18. (Previously Presented) A method of producing a crystal growth substrate according to claim 1, wherein said irregularities are uniformly spaced along said sapphire growth surface.

19. (Previously Presented) A method of producing a crystal growth substrate according to claim 1, wherein said irregularities are provided in an array across said sapphire growth surface.

20. (Currently Amended) A method of producing a semiconductor light-emitting element, comprising:

growing a desired semiconductor layer as a crystal on a sapphire substrate grown on a seed substrate; and

removing said seed substrate,

wherein cavities are formed periodically in a sapphire growth substrate of said seed substrate.